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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,808	12/26/2000	Masayuki Terao	Q62445	2609

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11/28/2005

SUGHRUE, MION, ZINN, MACPEAK & SEAS
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER

CHAI, LONGBIT

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/745,808

Applicant(s)

TERAO ET AL.

Examiner

Longbit Chai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23,25,26,28-31,33 and 34 is/are pending in the application.
4a) Of the above claim(s) 1-5 and 12-23,25,26,28-31,33 and 34 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 6-11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 26 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 6 – 11 have been presented for examination as to Applicant's election of Group II filed on 6/3/2005. Claims 6 – 11 have been amended in an amendment filed 10/13/2005. Therefore, presently pending claims are 6 – 11.

Response to Arguments

1. Applicant's arguments filed on 10/13/2005 with respect to the subject matter of the instant claims have been fully considered but are not persuasive.

2. As per claim 6, Applicant asserts: "the prior arts fail to teach an ID stored in a communication device (Page 17, 2nd Para)". Examiner notes Applicant's arguments have been fully considered but are not persuasive because Clark teaches: (a) the handheld computer device is shown installed in a cradle, which is directly connected to a host computer (Clark: Para [0027]), and the cradle handheld computer assembly (i.e. the communication device to meet the claim language) operated with various wireless short distance techniques such as radio frequency wireless communications (Clark: Para [0010], Line 10 – 12); and (b) the cradle handheld computer device includes its serial number (i.e. ID) that allows synchronization access to only registered or previously stored serial number at the host computer (Clark: Para [0060] Line 6 – 9). Therefore, Clark does teach an (same) ID stored in a communication device and as such applicant's arguments are respectfully traversed.

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3. Applicant also remarks: "the prior arts fail to teach a key module capable of being inserted into a slot of one of the two terminals, nor is there a teaching or suggestion of a communication device that is capable of being inserted into a slot of one of the two terminals (Page 18, 2nd Para)". Examiner notes Applicant's arguments have been fully considered but are not persuasive because (a) the Quick reference is relied upon to provide a key module capable of inserted into a slot of the terminals in order to register the ID at the terminal device (Quick: Column 1 Line 50 – 65), and (b) the Clark reference is relied upon to provide a communication device that is capable of being inserted into a slot of the terminals (Clark: Para [0038] and Figure 4 Element 48: cradle handheld computer assembly, qualified as a communication device, interface port connected to the host computer, qualified as a terminal device, as taught by Clark).
4. Furthermore, Applicant argues: "there is no suggestion or motivation to provide the password of Clark's terminals into a key module or communication device (Page 18, 2nd Para). Examiner notes Applicant's argument has no merit since such an alleged limitation has not been recited into the claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A person shall be entitled to a patent unless –

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koike (Patent Number: 6243578), in view of Quick (Patent Number: 6178506), and in view of Clark (Publication Number: 2001/0011308).

As per claim 6, Koike teaches a method of conducting authentication between a communication device which can be freely inserted into and extracted from a slot of a terminal device and said terminal device (Koike: see for example, Figure 1), comprising the steps of:

Koike does not disclose expressly (a) inserting a key module storing the same ID as an ID stored in the communication device into the slot to register the ID stored in the key module at the terminal device, and (b) conducting collation between the terminal device and the communication device inserted into the slot to determine whether the ID stored in the communication device and the ID registered at the terminal device coincide with each other.

Quick teaches inserting a key module to register the ID stored in the key module at the terminal device (Quick: see for example, Column 1 Line 53 – 65).

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Quick within the system of Koike in view of Shigeki because Quick teaches providing the user registration information through the use of an inserted module with interface adaptable to the terminal device (Quick: see for example, Column 1 Line 59 – 65).

Koike in view of Quick does not disclose expressly the key module storing the same ID as an ID stored in the communication device.

Clark teaches the key module storing the same ID as an ID stored in the communication device (Clark: Para [0060] Line 6 – 9 and Para [0010] Line 9 – 12 & Quick: Column 1 Line 50 – 65: (a) Clark is relied upon disclosing the ID stored in the communication device (i.e. a cradle handheld computer assembly with the interface port connected to the host computer) is the same ID (i.e. serial number) as stored in the terminal device (i.e. host computer), and (b) Quick is relied upon to provide the key module storing the target ID and subsequently registered / provided into the terminal device (i.e. host computer)).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Clark within the system of Koike in view Quick because Clark teaches providing an effective mechanism, i.e. registration serial number, to synchronize between the host computer and a cradle assembly connected to the host computer (Clark: see for example, Paragraph [0010] Page 2 Line 9 – 12 and Paragraph [0060] Page 8 Line 6 – 9).

Accordingly, Koike in view Quick and Clark teaches (a) inserting a key module storing the same ID as an ID stored in the communication device into the slot to register the ID stored in the key module at the terminal device, and (b) conducting collation between the terminal device and the communication device inserted into the slot to determine whether the ID stored in the communication device and the ID registered at the terminal device coincide with each other.

2. Claims 7 – 8 and 10 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koike (Patent Number: 6243578), in view of Quick (Patent Number: 6178506), in view of Clark (Publication Number: 2001/0011308), and in view of de la Huerga (Patent Number: 5960085).

As per claim 7, Koike in view of Quick and Clark teaches the claimed invention as described above (see claim 6). Koike in view of Quick and Clark does not teach when the communication device is extracted from the slot after authentication between the terminal device and the communication device is obtained, bringing the terminal device to a locked state where none of input by a user is accepted.

de la Huerga teaches when the communication device is extracted from the slot after authentication between the terminal device and the communication device is obtained, bringing the terminal device to a locked state where none of input by a user is accepted (de la Huerga: see for example, Column 4 Line 40 – 67 and Column 5 Line 1 – 11: de la Huerga teaches a security system equipped with a wireless device to

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exchange authentication information with the security badge of a system user (de la Huerga: see for example, Column 4 Line 42 – 43). After the authentication and system in service, the computer terminal continues to monitor the signal path between the security badge and the computer terminal. If the system user turns away from the computer terminal, then the keyboard is locked and the screen is blanked off (de la Huerga: see for example, Column 5 Line 3 – 5).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of de la Huerga within the system of Koike in view of Quick and Clark because de la Huerga teaches a limited access system for restricting and monitoring between wireless smart devices.

As per claim 8, Koike in view of Quick and Clark teaches the claimed invention as described above (see claim 6). Koike in view of Quick and Clark does not teach when the communication device is extracted from the slot after authentication between the terminal device and the communication device is obtained, bringing the terminal device to a locked state where none of input by a user is accepted.

de la Huerga teaches when the communication device is extracted from the slot after authentication between the terminal device and the communication device is obtained, bringing the terminal device to a locked state where none of input by a user is accepted (de la Huerga: see for example, Column 4 Line 40 – 67 and Column 5 Line 1 – 11).

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Koike in view of Quick and Clark does not teach when the communication device is inserted into the slot of the locked terminal device to obtain authentication between the terminal device and the communication device, releasing the terminal device from the locked state.

de la Huerga teaches when the communication device is inserted into the slot of the locked terminal device to obtain authentication between the terminal device and the communication device, releasing the terminal device from the locked state (de la Huerga: see for example, Column 4 Line 40 – 67 and Column 5 Line 10 – 11: de la Huerga teaches if the security badge is not properly positioned for more than a preset period of time, the system user will be logged off automatically. This implies the system user needs to go through the authentication process again after returning back to the proper position).

Same rationale for combination applies here as above in rejecting the claim 7.

As per claim 10 and 11, claim 10 and 11 do not further teach over claim 7 and 8 respectively. Therefore, see same rationale addressed above in rejecting claim 7 and claim 8.

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koike (Patent Number: 6243578), in view of Quick (Patent Number: 6178506), in view of Clark (Publication Number: 2001/0011308), and in view of Kung (Publication Number: 5434918).

As per claim 9, Koike teaches a method of conducting authentication between a communication device which can be freely inserted into and extracted from a slot of a terminal device and said terminal device (Koike: see for example, Figure 1), comprising the steps of:

Koike does not disclose expressly (a) inserting a key module storing the same ID and authentication code as an ID and an authentication code stored in the communication device and storing a cryptographic function paired with an inverse cryptographic function stored in the communication device into the slot to register the ID, the authentication code and the cryptographic function stored in the key module at the terminal device, and (b) when the communication device is inserted into the slot, conducting authentication between the communication device and the terminal device, said step (b) including: (b-1) collating the ID stored in the communication device and the ID registered at the terminal device.

Quick teaches (a) inserting a key module storing the same ID and authentication code as an ID and an authentication code stored in the communication device and storing a cryptographic function paired with an inverse cryptographic function stored in the communication device into the slot to register the ID, the authentication code and the cryptographic function stored in the key module at the terminal device, and (b) when the communication device is inserted into the slot, conducting authentication between the communication device and the terminal device, said step (b) including: (b-1) collating the ID stored in the communication device and the ID registered at the terminal

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device (Quick: see for example, Column 1 Line 53 – 65 and Column 2 Line 55 – 57:

Quick teaches using a key module to establish the user registration information and it is also well known in the field that registration information during the subscription time includes the user identity, initial subscription key K_i and the associated A3 cryptographic function).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Quick within the system of Koike in view of Shigeki because Quick teaches providing the user registration information through the use of an inserted module with interface adaptable to the terminal device (Quick: see for example, Column 1 Line 59 – 65).

Koike in view of Quick does not disclose expressly the key module storing the same ID as an ID stored in the communication device.

Clark teaches the key module storing the same ID as an ID stored in the communication device (Clark: see for example, Paragraph [0010] Page 2 Line 9 – 12 and Paragraph [0060] Page 8 Line 6 – 9).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Clark within the system of Koike in view of Quick because Clark teaches providing an effective mechanism, i.e. registration serial number, to synchronize between the host computer and a cradle assembly connected to the host computer (Clark: see for example, Paragraph [0010] Page 2 Line 9 – 12 and Paragraph [0060] Page 8 Line 6 – 9).

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Accordingly, Koike in view Quick and Clark teaches (a) inserting a key module storing the same ID and authentication code as an ID and an authentication code stored in the communication device and storing a cryptographic function paired with an inverse cryptographic function stored in the communication device into the slot to register the ID, the authentication code and the cryptographic function stored in the key module at the terminal device, and (b) when the communication device is inserted into the slot, conducting authentication between the communication device and the terminal device, said step (b) including: (b-1) collating the ID stored in the communication device and the ID registered at the terminal device.

Koike in view Quick and Clark does not disclose expressly (b-2) when collation of IDs succeeds, generating a random number, sending data obtained by encrypting the random number with the authentication code connected by the cryptographic function from the terminal device to the communication device and at the communication device side, restoring the authentication code and the random number by the inverse cryptographic function to collate the restored authentication code and the stored authentication code, and (b-3) when collation of authentication codes succeeds, sending data obtained by encrypting said restored random number by the inverse cryptographic function from the communication device to the terminal device and at the terminal device, restoring the random number by the cryptographic function to collate the restored random number with said random number generated by the own terminal device.

Kung teaches:

(b-2) when collation of IDs succeeds, generating a random number, sending data obtained by encrypting the random number with the authentication code connected by the cryptographic function from the terminal device to the communication device and at the communication device side, restoring the authentication code and the random number by the inverse cryptographic function to collate the restored authentication code and the stored authentication code (Kung: see for example, Column 4 Line 24 – 43: The Server as taught by Kung is equivalent to the terminal device and the Client is equivalent to the communication device. The password is equivalent to the authentication code. The encrypted password is decrypted by the client and thereby authenticate the Server to the Client because the password is known to the user (Kung: see for example, Column 4 Line 24 – 27)), and

(b-3) when collation of authentication codes succeeds, sending data obtained by encrypting said restored random number by the inverse cryptographic function from the communication device to the terminal device and at the terminal device, restoring the random number by the cryptographic function to collate the restored random number with said random number generated by the own terminal device (Kung: see for example, Column 4 Line 44 – 51: The Server as taught by Kung is equivalent to the terminal device and the Client is equivalent to the communication device. The password is equivalent to the authentication code. Kung also teaches, after authenticate the Server to the Client, the Client transmitting an encrypted message using the random number, where the random number can also be used as the encryption / decryption key. The Server decrypting the encrypted message and thereby authenticate the Client to

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the Server because the random number is known to and originated by the Server (Kung: see for example, Column 4 Line 50 – 51).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Kung within the system of Koike in view of Quick and Swamy because Kung teaches enhancing the system security by using mutual authentication between the Server and the Client (Kung: see for example, Column 1 Line 37 – 44).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Longbit Chai whose telephone number is 571-272-3788. The examiner can normally be reached on Monday-Friday 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Longbit Chai
Examiner
Art Unit 2131

LBC

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Ayaz Sheikh
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